

Appl. No. 10/069,680
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Reply To Office Action of 07/30/2003

Amendments to the claims:

Without prejudice, this listing of the claims replaces all prior versions and listings of the claims in the present application:

LISTING OF CLAIMS:

1-13. (Canceled).

14. (Currently Amended) A thermoelectric component, comprising:

a first element; and

a second element;

wherein the first element and the second element are in contact with each other in an area of at least one contact point; and

wherein at least in one vicinity of the contact point, at least one of the first element and the second element includes a ceramic material, wherein at least in one vicinity of the contact point, the ceramic material includes a filler of one of Cr_3C_2 , FeCr, FeCrNi, ZrN, ZrC, TiN and graphite.

15. (Original) The thermoelectric component according to claim 14, wherein the thermoelectric component includes a thermocouple.

16. (Original) The thermoelectric component according to claim 14, wherein in at least one vicinity of the contact point, a material of the first element and a material of the second element are configured so that at the contact point one of a contact voltage occurs in accordance with a Seebeck effect and a temperature change occurs in response to an impressed external electric current in accordance with a Peltier effect.

17. (Currently Amended) The thermoelectric component according to claim 16, wherein the first element and the second element are electrically interconnect with one of a device configured to measure the contact voltage and a device configured to impress an external electric current flowing through the contact point.

18. (Original) The thermoelectric component according to claim 14, wherein at least in one vicinity of the contact point, the first element includes a first ceramic material and the second element includes a second ceramic material different from the first ceramic material.

19. (Original) The thermoelectric component according to claim 14, wherein at least in one vicinity of the contact point, the first element includes a first ceramic material and the second element includes a solderable metal.

20. (Canceled)

21. (Currently Amended) The thermoelectric component according to claim ~~20~~ 14, wherein the filler material includes at least one of a filler material having an at least approximately metallic conductivity, an electrically semiconductive filler material and an insulating filler material.

22. (Canceled)

23. (Canceled)

24. (Original) The thermoelectric component according to claim 18, wherein at least one of the first ceramic material and the second ceramic material includes obtained by pyrolysis of one of a polymeric precursor material and a polymeric precursor material that includes at least one filler material.

25. (Original) The thermoelectric component according to claim 18, wherein at least one of the first ceramic material and the second ceramic material includes a ceramic material based on one of Si-C compounds, Si-C-N compounds, Si-Ti-C-O compounds, Si-C-O compounds, Si-B-C-N compounds, Si-B-C-O compounds, B-C-N compounds, Si-Al-C-O compounds, Si-Al-N-C-O compounds and Si-C-O-N compounds.

26. (Original) The thermoelectric component according to claim 14, wherein a

material of the first element and a material of the second element have an at least approximately equal thermal coefficient of expansion at least in the vicinity of the contact point.

27. (Original) The thermoelectric component according to claim 18, wherein the first ceramic material is obtained by pyrolysis of one of a first polymeric precursor material and a first polymeric precursor material that includes a first filler material and the second ceramic material is obtained by pyrolysis of one of a second polymeric precursor material and a second polymeric precursor material that includes a second filler material.

28. (Original) The thermoelectric component according to claim 27, wherein the first polymeric precursor material and the second polymeric precursor material are configured so that, in response to pyrolysis of the precursor materials, an at least approximately equal shrinkage occurs at least in the vicinity of the contact point.

29. (Currently Amended) A method, comprising the steps of:

providing a thermoelectric component, the thermoelectric component including a first element and a second element, the first element and the second element arranged in contact with each other in an area of at least one contact point, at least in one vicinity of the contact point, at least one of the first element and the second element including a ceramic material, wherein the ceramic material includes a filler of one of Cr_3C_2 , FeCr, FeCrNi, ZrN, ZrC, TiN and graphite; and

arranging the thermoelectric component in one of a thermocouple configured to one of measure temperature and a Peltier element as one of a thermoelectric heating element and a cooling element.